

# 1998 Crop Statistics & Annual Report

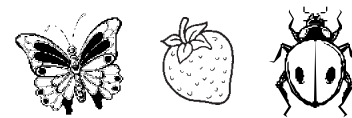


**County of San Diego**  
Department of Agriculture, Weights & Measures





## Highlights



Total Value	\$1,178,447,233
Estimated Economic Impact	\$4,124,565,316
Change in Value from 1997 --Percent of Change	+\$39,091,533 3%
Total Acreage	172,262
Change in Acreage from 1997 --Percent of Change	+1,345 Acres <1%
#1 Crop --Value	Indoor Flowering & Foliage Plants* \$295,878,756
Crop with Greatest Percent Change in Value --Percent of Change	Cucumbers 48%
Crop with Highest Value Per Acre --Dollar Value Per Acre	Indoor Flowering & Foliage Plants* \$597,735
Crop with Lowest Value Per Acre ( <i>excluding range</i> ) --Dollar Value Per Acre	Oat, Grain \$80
New Crops	Emu, Ostrich, Rhea
Rank of Agriculture as a Component of San Diego County's Economy	4th**



Download the 1998 Crop Statistics from our web site! Visit us at:  
<http://www.co.san-diego.ca.us/cnty/cntydepts/landuse/agri/agweb.html>

\*Previously referred to as Indoor Decoratives.

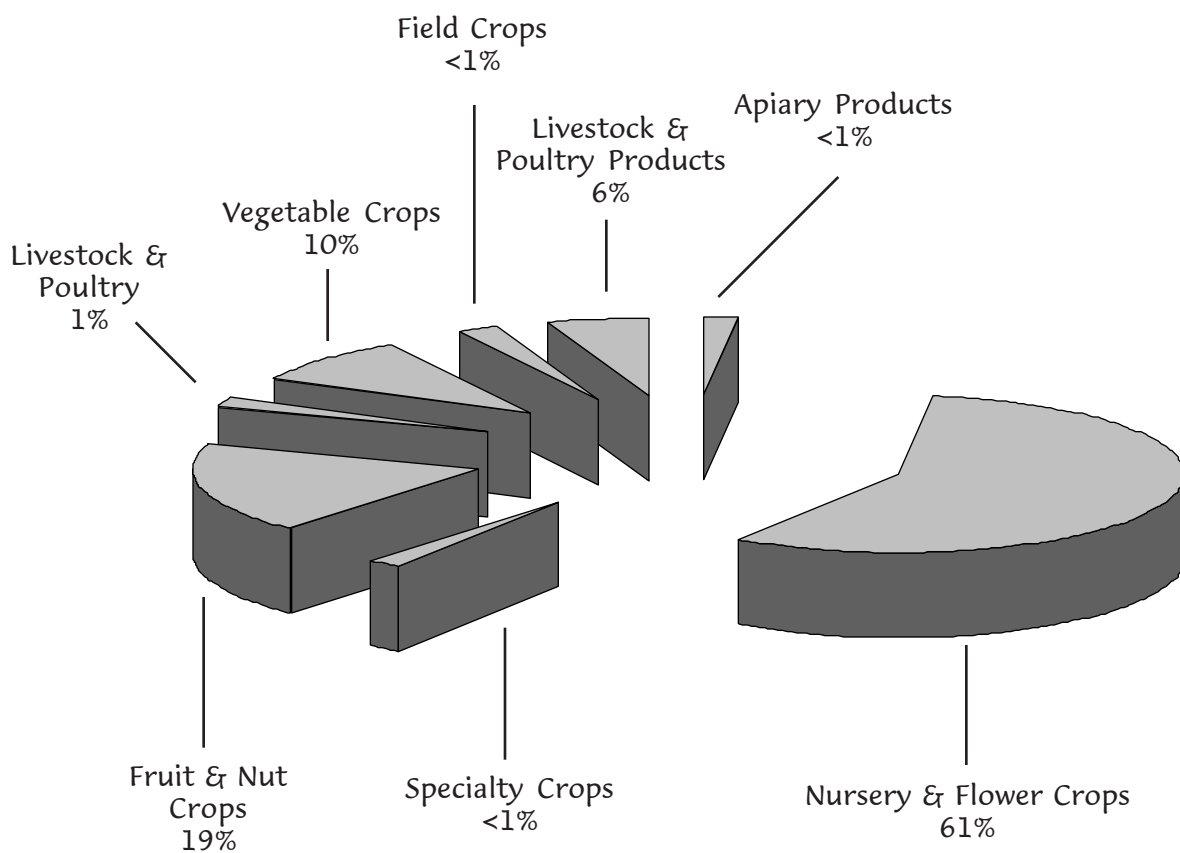
\*\*Agriculture ranks 4th behind manufacturing, tourism and defense.  
 Source: Greater San Diego Chamber of Commerce.



# Summary 1998 & 1997



	1998		Value	1997		Value
	Acres	Hectares		Acres	Hectares	
Nursery Products & Flower Crops	8,337	3,373	\$722,186,252	8,295	3,357	\$704,988,190
Fruit & Nut Crops	44,855	18,153	\$225,669,472	42,384	17,153	\$215,090,527
Livestock & Poultry Products			\$78,623,079			\$85,395,203
Vegetable Crops	12,563	5,084	\$128,472,996	13,227	5,354	\$112,364,649
Livestock & Poultry			\$15,634,166			\$14,082,554
Field Crops	106,507	43,103	\$6,147,451	107,011	43,307	\$5,650,940
Apiary Products			\$1,157,229			\$1,153,787
Specialty Crops			\$556,588			\$629,850
<b>TOTAL</b>	<b>172,262</b>	<b>69,713</b>	<b>\$1,178,447,233</b>	<b>170,917</b>	<b>69,171</b>	<b>\$1,139,355,700</b>



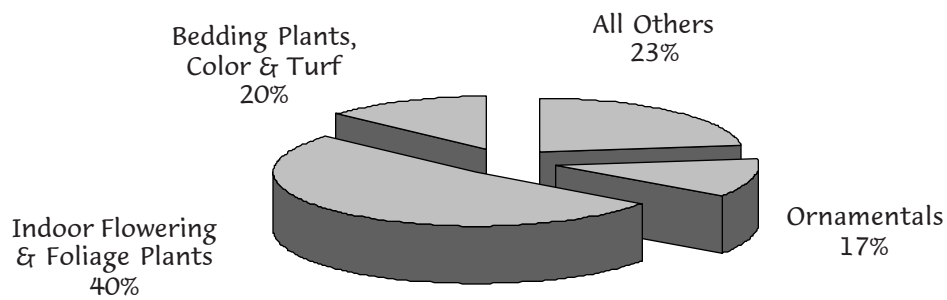


## Summary 1998 & 1997

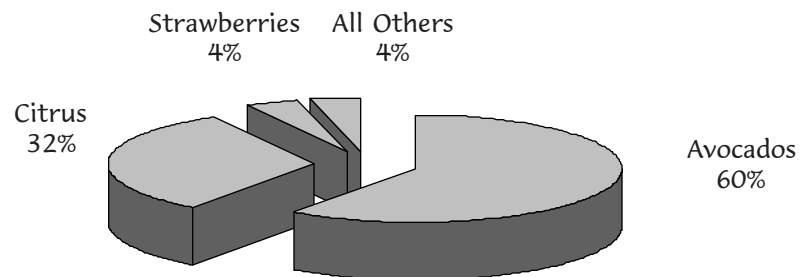


### Percent of Values by Selected Commodity Groups

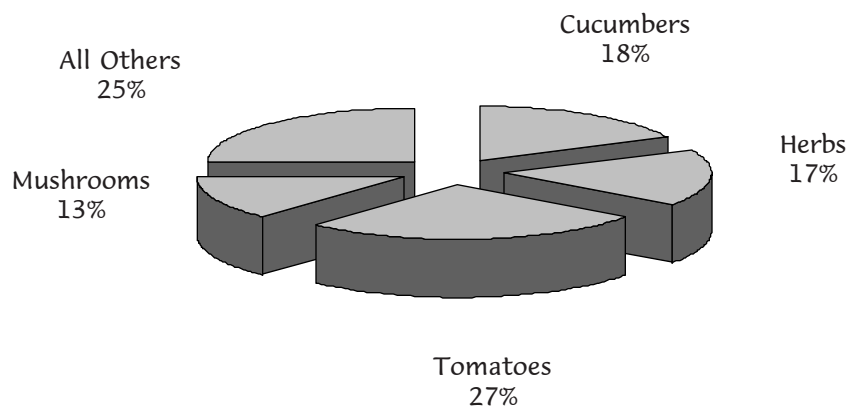
#### Nursery & Flower Crops



#### Fruit & Nut Crops



#### Vegetable Crops





# Nursery & Flower Crops

## 1998 & 1997



CROP	Year	Acres	Hectares	Quantity Sold	TOTAL
<b>NURSERY PRODUCTS</b>					
BEDDING PLANTS & TURF	1998	980		397	\$146,565,455
	1997	956		387	\$131,282,000
BULBS, CORMS, RHIZOMES, ROOTS, TUBERS	1998	140		57 20,254,245 BULBS	\$1,598,985
	1997	156		63 38,457,652 BULBS	\$2,101,100
CACTUS AND SUCCULENTS	1998	185		75	\$18,556,465
	1997	185		75	\$19,023,200
CITRUS, AVOCADO, AND SUBTROPICAL FRUIT TREES	1998	187		76 485,465 PLANTS	\$6,256,875
	1997	187		76 478,858 PLANTS	\$6,101,550
CUT CHRISTMAS TREES	1998	208		84	\$1,802,546
	1997	245		99	\$1,898,025
HERBACEOUS PERENNIALS	1998	150		61	\$8,959,879
	1997	148		60	\$8,825,000
INDOOR FLOWERING & FOLIAGE PLANTS*	1998	495		200	\$295,878,756
	1997	492		199	\$287,568,250
ORNAMENTAL TREES AND SHRUBS	1998	2,200		890 70,665,655 PLANTS	\$129,986,578
	1997	2,000		809 65,254,488 PLANTS	\$117,235,546
POINSETTIA	1998	125		51 7,213,165 PLANTS	\$31,254,654
	1997	78		32 3,325,125 PLANTS	\$10,598,542
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TOTAL NURSERY CROPS	1998	4,670		1,891	\$640,860,193
	1997	4,797		1,941	\$629,198,467

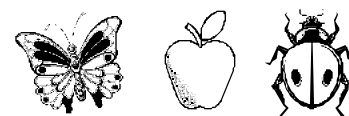
\*Previously Indoor Decoratives.

CROP	Year	Acres	Hectares	Quantity Sold	TOTAL
FLOWER CROPS					
TOTAL CARNATIONS	1998	60	24		\$2,620,999
	1997	66	27		\$2,607,443
CARNATION, STANDARD	1998	25	10	19,958,854 BLOOMS	\$1,168,541
	1997	29	12	21,854,587 BLOOMS	\$1,208,984
CARNATION, MINI	1998	35	14	1,485,445 BLOOMS	\$1,452,458
	1997	37	15	2,525,872 BLOOMS	\$1,398,459
OTHER CUT FOLIAGE	1998	525	212		\$9,021,553
	1997	500	202		\$8,901,258
LEPTOSPERMUM	1998	380	154	2,021,544 BUNCHES	\$2,405,465
	1997	380	154	1,802,547 BUNCHES	\$1,795,426
PROTEAS	1998	475	192	3,625,465 BLOOMS	\$3,602,440
	1997	475	192	3,584,845 BLOOMS	\$3,585,465
ROSES	1998	47	19	250,254,025 BLOOMS	\$7,254,684
	1997	47	19	248,598,750 BLOOMS	\$7,025,452
WAX FLOWERS	1998	720	291	5,652,545 BUNCHES	\$7,855,464
	1997	680	275	3,252,585 BUNCHES	\$5,020,154
ALL OTHERS	1998	1,400	567		\$48,565,454
	1997	1,350	546		\$46,854,525
TOTAL FLOWER CROPS	1998	3,667	1,483		\$81,326,059
	1997	3,498	1,416		\$75,789,723
TOTAL NURSERY & FLOWER CROPS	1998	8,337	3,375		\$722,186,252
	1997	8,295	3,357		\$704,988,190



# Fruit & Nut Crops

## 1998 & 1997

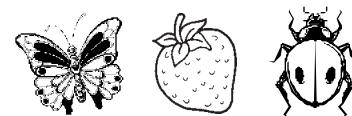


CROP	Year	Harvested		Production		Total Production		US\$/		TOTAL
		Acres	Hectares	Tons/ Acre	Metric Tons/ Hectare	Tons	Metric Tons	Tons	Metric Ton	
TOTAL	1998	505		204			1,192	1,311		\$467,125
APPLES	1997	742		300			1,922	1,602		\$812,171
FRESH	1998	505		204	1.28	2.87	646	585	575	\$371,680
	1997	742		300	1.45	3.25	1,076	975	611	\$657,375
CIDER	1998				1.08	2.42	545	726	175	\$95,445
	1997				1.14	2.56	846	627	183	\$154,796
TOTAL	1998	26,347		10,662			68,081	61,726		\$136,500,282
AVOCADOS	1997	22,600		9,146			63,945	58,001		\$121,917,547
HASS	1998	23,147		9,367	2.62	5.87	60,645	54,984	2,140	\$129,780,514
	1997	20,880		8,450	2.86	6.41	59,717	54,165	1,996	\$119,194,733
FUERTE	1998	900		364	1.26	2.82	1,134	1,026	1,202	\$1,363,068
	1997	990		401	1.69	3.79	1,673	1,520	658	\$1,100,900
OTHER	1998	2,300		931	2.74	6.14	6,302	5,716	850	\$5,356,700
	1997	730		295	3.50	7.85	2,555	2,316	635	\$1,621,914
TOTAL	1998	15,946		6,453						\$73,760,911
CITRUS	1997	17,001		6,880						\$78,522,407
TOTAL	1998	2,800		1,133	15.95	35.75	44,660	40,505		\$9,066,400
GRAPEFRUIT	1997	3,249		1,315	18.64	41.78	60,561	54,941		\$11,513,266
FRESH MARKET	1998	2,800		1,133	14	31.38	39,200	35,554	215	\$8,428,000
	1997	3,249		1,315	14.65	32.84	47,598	43,185	225	\$10,709,528
BY PRODUCT	1998				3.8	8.52	10,640	10,640	60	\$638,400
	1997				3.99	8.94	12,964	12,964	62	\$803,738
KUMQUATS	1998	140		57	3.01	6.75	421	385	989	\$416,765
	1997	149		60	2.98	6.68	444	401	977	\$433,788
TOTAL	1998	3,211		1,299	19.37	43.42	62,197	56,403		\$22,464,500
LEMONS	1997	3,265		1,321	20.02	44.88	65,365	59,286		\$25,837,341
FRESH MARKET	1998	3,211		1,299	14.32	32.1	45,982	41,698	448	\$20,599,712
	1997	3,265		1,321	15.03	33.69	49,073	44,504	487	\$23,898,551
BY PRODUCTS	1998				5.05	11.32	16,216	14,705	115	\$1,864,788
	1997				4.99	11.19	16,292	14,782	119	\$1,938,790
TOTAL	1998	650		263	7.33	16.43	4,765	4,321		\$1,251,127
LIMES	1997	705		285	7.46	16.72	5,259	4,765		\$1,434,502
FRESH MARKET	1998	650		263	4.22	9.46	2,743	2,488	392	\$1,075,256
	1997	705		285	4.41	9.89	3,109	2,819	394	\$1,223,773
BY PRODUCT	1998				3.11	6.97	2,022	1,833	87	\$175,871
	1997				3.05	6.84	2,150	1,949	98	\$210,729



# Fruit & Nut Crops

## 1998 & 1997



CROP	Year	Harvested		Production		Total Production		US\$/		TOTAL
		Acres	Hectares	Acre	Hectare	Tons	Metric Tons	Ton	Metric Ton	
TOTAL ORANGES, NAVEL	1998	1,455	589	13.86	31.07	20,166	18,300			\$5,438,011
	1997	1,488	602	13.85	31.05	20,609	18,692			\$5,718,792
FRESH MARKET	1998	1,455	589	11.45	25.67	16,660	15,120	298	328	\$4,964,620
	1997	1,488	602	11.62	26.05	17,291	15,682	301	332	\$5,204,471
BY PRODUCT	1998			2.41	5.4	3,507	3,181	135	149	\$473,391
	1997			2.23	5.0	3,318	3,010	155	171	\$514,321
TOTAL ORANGES, VALENCIA	1998	6,790	2,748	17.08	38.29	115,973	105,221			\$27,008,583
	1997	7,150	2,894	16.93	37.95	121,050	109,827			\$26,724,555
FRESH MARKET	1998	6,790	2,748	14.38	32.24	97,640	88,596	240	265	\$23,433,648
	1997	7,150	2,894	14.28	32.01	102,102	92,637	225	248	\$22,972,950
BY PRODUCT	1998			2.7	6.05	18,333	16,625	195	215	\$3,574,935
	1997			2.65	5.94	18,948	17,190	198	218	\$3,751,605
TOTAL TANGELOS, TANGERINES	1998	900	364	17.05	38.22	15,345	13,912			\$8,115,525
	1997	995	403	14.6	32.73	14,527	13,190			\$6,860,163
FRESH MARKET	1998	900	364	13.55	30.37	12,195	11,055	635	700	\$7,743,825
	1997	995	403	11.05	24.77	10,995	9,982	587	647	\$6,453,948
BY PRODUCT	1998			3.5	7.85	3,150	2,857	118	130	\$371,700
	1997			3.55	7.96	3,532	3,208	115	127	\$406,215
GRAPES, WINE	1998	187	76	2.58	5.78	483	439	490	368	\$236,425
	1997	187	76	2.99	6.7	559	509	508	368	\$284,023
MACADAMIA NUTS	1998	185	75	1.05	2.35	194	176	2,565	2,827	\$498,380
	1997	209	85	1.16	2.6	242	221	2,655	2,927	\$643,572
MISC. FRUITS & NUTS*	1998	785	318							\$2,101,025
	1997	825	334							\$1,985,229
PERSIMMONS	1998	450	182	7.01	15.71	3,155	2,859	428	472	\$1,350,126
	1997	480	194	6.98	15.65	3,350	3,036	474	522	\$1,588,090
TOTAL STRAWBERRIES	1998	450	182	26.56	59.54	11,952	10,836			\$10,755,198
	1997	340	138	26.58	59.58	9,037	8,222			\$9,337,488
FRESH MARKET	1998	450	182	18.68	41.87	8,406	7,620	1,058	1,166	\$8,893,548
	1997	340	138	18.56	41.61	6,310	5,742	1,255	1,383	\$7,919,552
PROCESSING	1998			7.88	17.66	3,546	3,214	525	579	\$1,861,650
	1997			8.02	17.98	2,727	2,481	520	573	\$1,417,936
TOTAL FRUIT & NUT CROPS	1998	44,855	18,160							\$225,669,472
	1997	42,384	17,153							\$215,090,527

\*Includes apricots, cherimoyas, raspberries, peaches, pears, guavas and walnuts.



# Vegetable Crops

## 1998 & 1997



CROP	Year	Harvested		Production		Total Production		US\$/		TOTAL
		Acres	Hectares	Tons/ Acre	Metric Tons/ Hectare	Tons	Metric Tons	Tons	Metric Ton	
BEANS, SNAP	1998	188		76	4.62	10.36	869	787	1,302	\$1,130,917
	1997	264		107	4.38	9.82	1,156	1,051	1,280	\$1,480,064
BUNCH VEGETABLES*	1998	356		144						\$2,102,242
	1997	392		159						\$2,080,398
CABBAGE	1998	44		18	14.9	33.4	656	601	320	\$209,792
	1997	40		16	15.3	34.3	612	549	260	\$159,120
CORN, SWEET	1998	449		182	7.2	16.14	3,233	2,937	425	\$1,373,940
	1997	410		166	7.16	16.05	2,936	2,664	461	\$1,353,312
TOTAL CUCUMBERS	1998	3,516		1423			41,235	37,441		\$23,737,639
	1997	2,819		1141			36,338	32,996		\$15,983,027
FIELD	1998	3,507		1419	11.65	26.12	40,857	37,064	568	\$23,206,549
	1997	2,810		1137	12.81	28.72	35,996	32,655	425	\$15,298,343
HOT HOUSE	1998	9		4	42	94.15	378	377	1,405	\$531,090
	1997	9		4	38	85.18	342	341	2,002	\$684,684
HERBS	1998	422		171	18.6	41.7	7,849	7,131	2,852	\$22,385,918
	1997	502		203	10.66	23.9	5,351	4,852	3,115	\$16,669,300
MUSHROOMS	1998	25		10	288	645.6	7,200	6,456	2,455	\$17,676,000
	1997	21		8	345	773.38	7,245	6,187	2,142	\$15,518,790
PEPPERS, BELL	1998	693		280	14.32	32.1	9,924	8,988	540	\$5,358,852
	1997	585		237	14.21	31.85	8,313	7,548	475	\$3,948,628
PEPPERS, CHILI	1998	38		15	15.03	33.69	571	505	780	\$445,458
	1997	42		17	14.98	33.58	629	571	705	\$443,586
POTATOES	1998	1,235		500	22.35	50.1	27,602	25,050	120	\$3,312,276
	1997	1,625		658	18.46	41.38	29,998	27,228	175	\$5,249,563
SQUASH	1998	561		227	11.86	26.59	6,654	6,036	427	\$2,841,045
	1997	691		280	11.31	25.35	7,815	7,098	425	\$3,321,460
TOTAL TOMATOES	1998	4,386		1775			78,303	71,029		\$35,313,316
	1997	5,036		2038			95,686	86,806		\$30,236,341
TOMATOES, FRESH	1998	4,258		1723	17.85	40.01	76,005	68,937	444	\$33,746,353
	1997	4,887		1978	19.03	42.66	93,000	84,381	306	\$28,457,878
TOMATOES, CHERRY	1998	128		52	17.95	40.24	2,298	2,092	682	\$1,566,963
	1997	149		60	18.03	40.42	2,687	2,425	662	\$1,778,463
MISC. VEGETABLES*	1998	650		263						\$12,585,601
	1997	800		324						\$15,921,060
TOTAL VEGETABLES	1998	12,563		5,086						\$128,472,996
	1997	13,227		5,354						\$112,364,649

\*Includes collards, Chinese cabbage, green onions, mustard & turnip greens, parsley, radishes and spinach.

\*\*Includes canteloupe, chayote, pumpkin, tomatillos, sweet potato, cauliflower, watermelon, leaf lettuce, celery & winter squash.



## Field Crops

### 1998 & 1997



CROP	Year	Acres	Tons/		Tons	US\$/		Ton	Metric Ton	TOTAL
			Hectares	Acre		Metric Tons	US\$/			
BARLEY, GRAIN	1998	200	81	1.74	3.9	348	316	102.65	113.15	\$35,722
	1997	900	364	0.55	1.23	495	448	101.56	111.95	\$50,272
GREENCHOP	1998	125	51	22.95	51.45	2,869	2,624	22.06	24.32	\$63,286
	1997	125	51	22.85	51.22	2,856	2,612	21.02	23.17	\$60,039
HAY, OAT	1998	4,600	1,862	2.1	4.71	9,660	8,770	52.05	57.37	\$502,803
	1997	5,800	2,347	0.88	1.97	5,104	4,624	45.86	71.85	\$234,069
OAT, GRAIN	1998	300	121	0.78	1.75	234	212	102.65	113.15	\$24,020
	1997	400	162	0.55	1.23	220	199	98.65	71.85	\$21,703
PASTURE, IRRIGATED	1998	2,750	1,113					1,555.00	1,714.08	\$4,276,250
	1997	2,750	1,113					1,550.00	1,708.57	\$4,262,500
RANGE	1998	95,000	38,446					4.95	5.46	\$470,250
	1997	95,000	38,446					4.93	5.43	\$468,350
SILAGE	1998	32	13	15.8	35.42	506	460	22.50		\$11,376
	1997	36	15	15.6	34.97	562	525	23.98		\$13,467
WHEAT	1998	3,500	1,416	1.65	3.7	5,775	5,239	132.25	145.78	\$763,744
	1997	2,000	809	2.2	4.93	4,400	3,988	122.85	132.80	\$540,540
TOTAL FIELD CROPS	1998	106,507	43,120							\$6,147,451
	1997	107,011	43,307							\$5,650,940



## Apiary Products

### 1998 & 1997

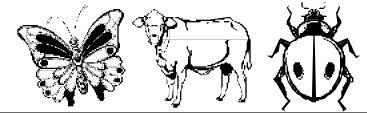


CROP	Year	TOTAL
HONEY	1998	\$1,003,002
	1997	\$1,003,002
BEES WAX	1998	\$19,565
	1997	\$19,565
BEES AND QUEENS	1998	\$87,598
	1997	\$86,495
POLLEN	1998	\$42,564
	1997	\$41,025
POLLINATION	1998	\$4,500
	1997	\$3,700
TOTAL APIARY	1998	\$1,157,229
	1997	\$1,153,787



## Livestock & Poultry

### 1998 & 1997



	Year	# Head	Total Weight		Per Unit		TOTAL
			CWT	Metric Ton	CWT	Metric Ton	
CATTLE AND CALVES	1998	28,500	213,750	9,695	62	1,367	\$13,252,500
	1997	29,005	217,538	9,866	59	1,301	\$12,834,742
HOGS AND PIGS	1998	1500	3,750	170	35	772	\$131,250
	1997	1545	3,863	175	54	1,190	\$208,602
CHICKENS, MISC. MEAT	1998	2,002,005	72,072	3,269	13	176.37	\$936,936
	1997	2,285,003	82,260	3,731	11	242.51	\$904,860
RABBITS	1998	20,000	1,000	45	62	1,367	\$62,000
	1997	24,003	1,200	54	65	1,433	\$78,000
OSTRICH, EMU, RHEA, TOTAL*	1998						\$1,200,000
CHICKS	1998	4,000			\$75/CHICK		\$300,000
MEAT	1998	300,000LBS.			\$3/LB		\$900,000
LAMBS, SHEEP	1998	780	780	35	66	1,455	\$51,480
	1997	805	805	37	70	1,543	\$56,350
TOTAL LIVESTOCK AND POULTRY	1998	2,052,785					\$15,634,166
	1997	2,340,361					\$14,082,554



## Livestock & Poultry Products

### 1998 & 1997



	Year	Production		Per Unit		TOTAL
		CWT	Metric Ton	\$/CWT	Metric Ton	
MILK, MARKET	1998	1,505,611	68,294	15.35	338	\$23,116,000
	1997	1,505,686	68,290	13.01	287	\$19,588,975
MILK, MANUFACTURING	1998	0	0	0	0	\$0
	1997	587	27	13.14	290	\$7,713
EGGS, CHICKEN MARKET	1998	98,985,856doz		0.56doz		\$55,432,079
	1997	102,235,489doz		0.64doz		\$65,430,713
OSTRICH, EMU, RHEA HIDES*	1998	400		\$125/HIDE		\$50,000
OSTRICH, EMU, RHEA OIL*	1998	2,500 GAL		\$10/GAL		\$25,000
TOTAL LIVESTOCK AND POULTRY PRODUCTS	1998					\$78,623,079
	1997					\$85,027,401

\*New crop not previously listed.



## Specialty Crops

1998 & 1997



ITEM	Year	TOTAL
TIMBER	1998	\$56,588
	1997	\$79,850
FIREWOOD	1998	\$500,000
	1997	\$550,000
TOTAL TIMBER PRODUCTS		
	1998	\$556,588
	1997	\$629,850



## Crops Valued at \$10 Million or More



Crop	1998	1997
Indoor Flowering & Foliage Plants	\$295,878,756	\$290,254,655
Bedding Plants & Turf	\$146,565,455	\$145,215,445
Avocados	\$136,500,282	\$121,918,058
Ornamental Trees & Shrubs	\$129,986,578	\$125,924,836
Eggs	\$55,432,079	\$65,430,713
Tomatoes	\$35,313,316	\$30,236,341
Poinsettia	\$31,254,654	\$29,854,656
Valencia Oranges	\$27,008,583	\$26,008,583
Cucumbers	\$23,737,639	\$15,983,027
Milk, Market	\$23,116,000	\$19,588,975
Lemons	\$22,464,500	\$25,837,341
Herbs	\$22,385,918	\$16,669,300
Cactus & Succulents	\$18,556,465	\$19,023,200
Cattle & Calves	\$13,252,500	\$12,834,742
Strawberries	\$10,755,198	\$9,337,488



# Ten Year Comparison

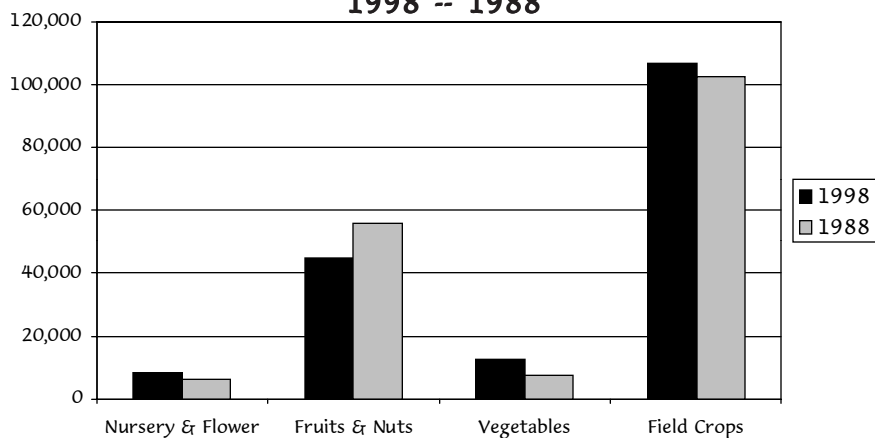
## 1998 & 1988



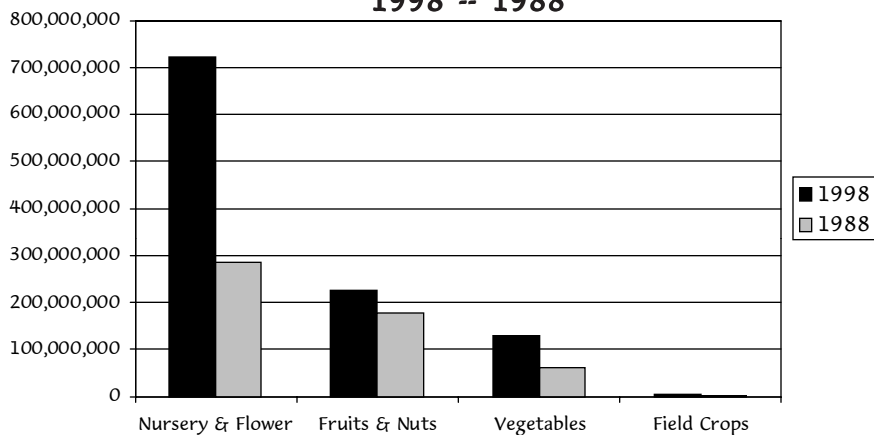
Crop	1998			1988		
	Acres	Hectares	Value	Acres	Hectares	Value
Nursery & Flower Crops	8,337	3,373	\$722,186,252	6,083	2,462	\$284,597,290
Fruit & Nut Crops	44,855	18,153	\$225,669,472	55,841	22,599	\$176,733,613
Livestock & Poultry Products			\$78,623,079			\$65,229,432
Vegetable Crops	12,563	5,084	\$128,472,996	7,511	3,040	\$61,165,824
Livestock & Poultry			\$15,634,166			\$18,777,027
Field Crops	106,507	43,103	\$6,147,451	102,620	41,530	\$1,095,036
Apiary Products			\$1,157,229			\$621,000
Specialty Crops			\$556,588			**
<b>TOTAL</b>	<b>172,262</b>	<b>69,713</b>	<b>\$1,178,447,233</b>	<b>172,055</b>	<b>69,631</b>	<b>\$608,219,222</b>

\*\*Not Reported in 1988.

### Acreage Comparison 1998 -- 1988



### Value Comparison 1998 -- 1988

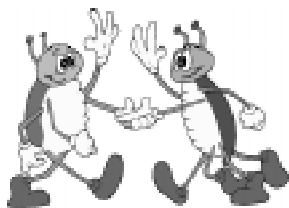




# **It's a Bug's Year**

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Insects. We love them, at least when they are safely contained in this year's hit movies. But when we find them in our homes, yards, gardens and farms, that's another matter. While there are many beneficial insects and there is a place for all insects in certain environments, there are some we don't want to live with in San Diego County if we can avoid them. Exotic insects that get accidentally introduced can be a serious problem, primarily because they have no natural predators to keep them in check.



1998 was a record year in San Diego for finding unwelcome bugs. And in addition to the ones we found, there are others threatening to enter from areas close by. Short of throwing up our hands and declaring this the Year of the Bug,

what can we do? Read on for some enlightening information about the insects we are trying to control or monitor. It might be a bug's life, but there are some steps you can take to minimize how much involvement they have in yours.

## **Killer Bees**

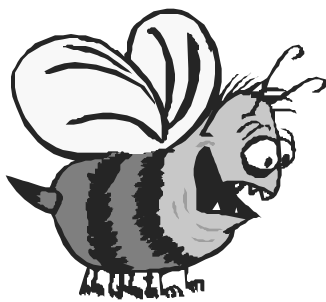
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We have all heard horror stories about them. How much is true and what is the real danger?

Africanized honey bees (AHB), the so-called killer bees, are actually products of an experiment gone awry. In 1956 a researcher imported honey bees from South Africa to Brazil. At the time the only honey bees in all of the Americas were the European variety, which were brought by early European settlers. They were not particularly well-suited to the climates of South and Central America. In 1957 some of the original African bees were released from the experiment in Brazil and began hybridizing with European bees. They dispersed quickly, expanding their territory by as much as 300 miles a year. In 1990 they reached the United States by way of Hidalgo, Texas. Parts of Texas, New Mexico, Arizona, Nevada and California are now considered infested. San Diego County has been living with killer bees since 1994, when they were discovered in the Borrego Springs area. They have slowly moved westward into more

populated areas of the county.

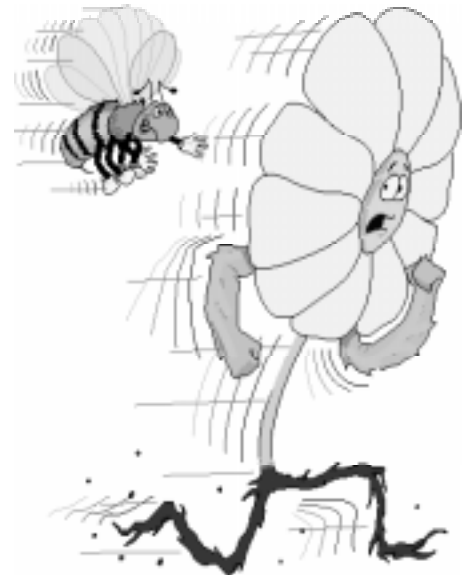
What can we expect from these bees? They are less predictable and more defensive than European honey bees. They respond quickly to a perceived threat, sting in greater numbers and stay agitated longer. They can sense a threat 50 feet or more from their nests and are also sensitive to vibrations from power equipment such as lawnmowers and weed trimmers.



Before you get too concerned and think you are in grave danger every time you encounter a honey bee, remember one important fact. Honey bees are only defensive when their hives are threatened. When you see them flying around the iceplant in your yard, they will rarely bother you, since they are away from their nest and have work to do. Focus your efforts on making sure bees do not nest where you live, work and play and you will go a long way towards protecting yourself and your family.

# Killer Bee Safety Precautions

- Constantly be on the alert for nests of bees. Listen for buzzing or watch for lots of bee activity in and around sheds, holes in trees, empty containers, meter boxes, old tires and other places bees might nest.
- NEVER disturb a nest of bees. Contact a pest control company to remove the nest if you encounter one.
- ALWAYS check the area before doing yard work or gardening, especially when using power equipment.
- Seal off any openings in your home that are 1/8" or greater. Check around chimneys, plumbing and the clothes dryer vent for holes or spaces.
- If you are stung, get the stingers out quickly, wash the area with soap and water and apply ice for a few minutes to relieve the pain and swelling.
- Immediately seek medical attention if breathing is troubled, you are stung more than 15 times or you are allergic to bee stings.



## Killer Bee Myths: What's Really True?

**Myth:** A killer bee can sting you multiple times.

**Reality:** All honey bees, including killer bees, lose their stinger when they sting and die shortly thereafter. Each killer bee can only sting once. The problem is that, when provoked, killer bees tend to sting in great numbers.

**Myth:** One sting from a killer bee is deadly.

**Reality:** One sting from a killer bee is no worse than one sting from a common honey bee. However, if you are allergic to honey bee stings, one sting, no matter what the type of honey bee, can be serious.

**Myth:** You can tell a killer bee from a regular honey bee because it is bigger.

**Reality:** Killer bees and our common honey bees are virtually the same size. Killer bees tend to be slightly smaller and darker, but the difference isn't detectable with the naked eye.

**Myth:** You should remove all plants and flowers in your yard that attract bees.

**Reality:** When collecting pollen and nectar, bees are very docile. They only become aggressive when their nests are threatened. Since foraging bees are not a threat, but an upset hive might be, remove bee hives rather than particular plants and flowers.



Need more information on killer bees? Call our information line  
at

1-800-200-BEES.

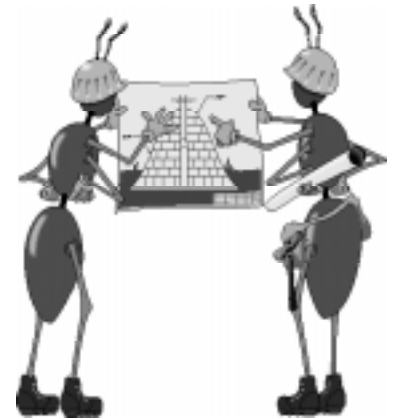
We will return your call within the next business day.

# Red Imported Fire Ants

As if killer bees weren't enough, red imported fire ants (RIFA) are now at our doorstep. These stinging ants were probably brought to the United States from Brazil in the 1930s. Of the two species of fire ants that have been accidentally introduced into this country, RIFA is the bigger problem. They now occupy more than 260 million acres in 11 southern states and Puerto Rico.

Red imported fire ants don't make our good bug list for several reasons.

- They sting and bite and have the most toxic venom of all the fire ant species. Ten to 20 stings per attack are common. Some people are allergic to them and have life-threatening responses.
- They disrupt or displace our native ants, causing environmental problems. Scientists have noted fewer birds and reptiles in infested areas.
- Red imported fire ants feed on germinating seeds and damage crops including corn, soybeans, citrus and berries.
- They can cause damage to structures, electrical equipment, gardens and landscaping.



Although red imported fire ants were not found in San Diego County in 1998, a small infestation was discovered in San Marcos in March of 1999. There is a large infestation in Orange County, just to our north. Agricultural officials are working to eradicate all known infestations. We are also taking some precautions to help prevent their spread. All shipments of honey bees into California are being inspected, since RIFA are known to travel this way. In addition, we inspect local nurseries to be sure the ants have not come in with their plant shipments.

## California's Native Fire Ant

California does have one native species of fire ant. Although they do bite and sting, Southern fire ants are far less aggressive than red imported fire ants. They also don't build mounds like their nastier relatives. Southern fire ants are found in coastal and inland regions, including San Diego County, and look very similar to the red imported fire ant. They are also sometimes confused with harvester ants, which bite and sting but are not as numerous as fire ants.

## Talk About a Bad Lie.....

In some parts of Texas where RIFA are well established, golf courses have special fire ant rules. "If your ball drops into a hazard zone, you do not have to get stung to finish the hole. You are allowed to drop a new ball at a safe spot, as long as it is further from the hole."

*From Common Sense Pest Control XIV(3), Summer 1998.*



When we talk about fruit flies, we don't mean the little pesty critters that invade your fruit bowl if you leave the bananas in it for too long. We are referring to a type of exotic insect that could cause devastating consequences if it ever became established in California. San Diego County had infestations of two different fruit flies during the past year: the Mexican fruit fly and the Mediterranean fruit fly.

Both Mexfly and Medfly, as they are often called, cause damage to fruit during the maggot stage. The adult female pierces the skin of fruits and vegetables and lays her eggs. The eggs hatch and develop into maggots. That is when things go from bad to worse. Maggots feed on the fruit pulp, which starts to decay. Slice a maggot-infested orange in half and you will see why these insects could ruin your resolve to eat five servings of fruits and vegetables a day!

## Life with Fruit Flies

Just how bad would it be if Mediterranean or Mexican fruit flies became established in San Diego or other parts of California? Here are just a few of the problems we could expect:

Our backyard fruit trees would become infested, so the fruit would be maggoty and would drop and rot before it was ripe.

Farmers and home gardeners would need to use more pesticides to keep crops free of maggots.

Other countries would ban imports of fruits and vegetables grown here. Australia, New Zealand, Japan and Taiwan all refused to accept San Diego-grown produce during recent Medfly and Mexfly infestations.

The cost of produce would increase. Medfly, for example, could cost American consumers an additional \$825 million per year alone.

Organic farming of some crops would be almost impossible. San Diego County has many small organic farmers whose businesses could be jeopardized.

## Fruit Fly Espionage

How do we know when fruit flies are here? The Department of Agriculture, Weights & Measures, in cooperation with the California Department of Food and Agriculture, places thousands of traps throughout the urban parts of the county. The traps contain a substance intended to lure the flies to them. Although this system can alert us to the problem, it can't trap out all of the fruit flies in an infested area. Our best defense is still keeping them from entering California in the first place.



## Don't Pack a Pest

So you had a great vacation in Hawaii. As you were heading back to the airport, you stopped at a roadside stand and bought some fruit, which you slipped into your luggage for the trip home. Or you were on your way back from the beach at

Ensenada and forgot about the leftover guavas in the cooler in the back seat. Neither of these situations sounds like anything to get excited about. However, if the fruit happens to contain fruit fly maggots, the consequences of bringing them into San Diego are anything but dull. Never bring or mail fruits, vegetables, or plants to California unless they have been cleared by agricultural inspectors beforehand. Medfly and Mexfly are notorious hitch-hikers. You can help: don't pack a pest!



## Agriculture, Weights & Measures 1998 Annual Report



### Department Overview

The Department of Agriculture, Weights and Measures is a diverse department offering a wide variety of services. Although we are a County department, we are also part of a statewide network of County Agricultural Commissioners that was created by the State legislature in 1881. Since 1972 the Department has included agriculture and weights & measures. We have two primary missions that we work to achieve each business day. We strive to:

- Enhance and promote the preservation of agriculture and the environment while maintaining the health and safety of all citizens; and
- Assure equity in the marketplace through education and the enforcement of laws and regulations.

Some of the duties of the Agricultural Commissioner remain the same as when the office was originally created, such as abatement of insect pests. However, the preservation, protection and regulation of the agricultural industry, as well as our consumer and standards protection functions, have changed dramatically during that time. Besides the traditional activities of the Commissioner/Sealer, the office is now involved in endangered species conservation, land use, prescribed burning, habitat repair and certification of organic farms. As San Diego County grows and evolves, the Department of Agriculture, Weights and Measures strives to offer programs and services to meet the needs of our diverse community.



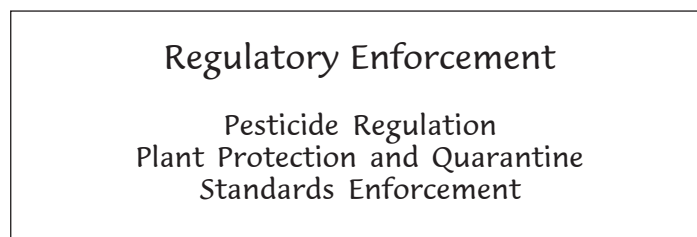
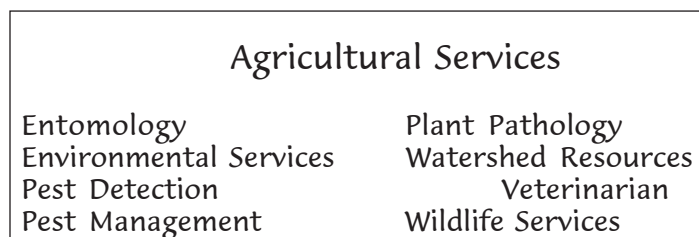
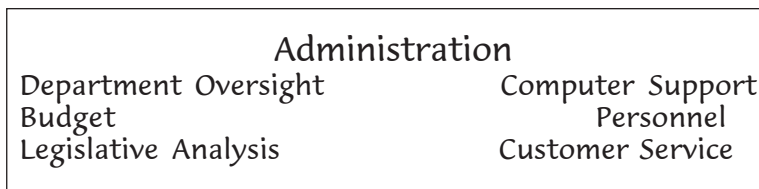
### Our Customers

Agriculture, Weights and Measures provides such a broad array of services, we serve nearly every person in the county. Here is just a short list of our customers:

- The County's 5,925 farms and farmers.
- 6,500 businesses with 137,000 commercial weighing devices.
- More than 2,000 citizens with honey bee or white fly problems.
- An average of 600 citizens per month who visit our front counters to obtain permits, purchase rodent bait or utilize other services.
- The County's 17,000 employees, many of whom work in facilities where we provide pest control.
- More than 2,000 school children, who heard presentations by our staff.
- 812 citizens who needed help with skunks, coyotes and other wildlife.

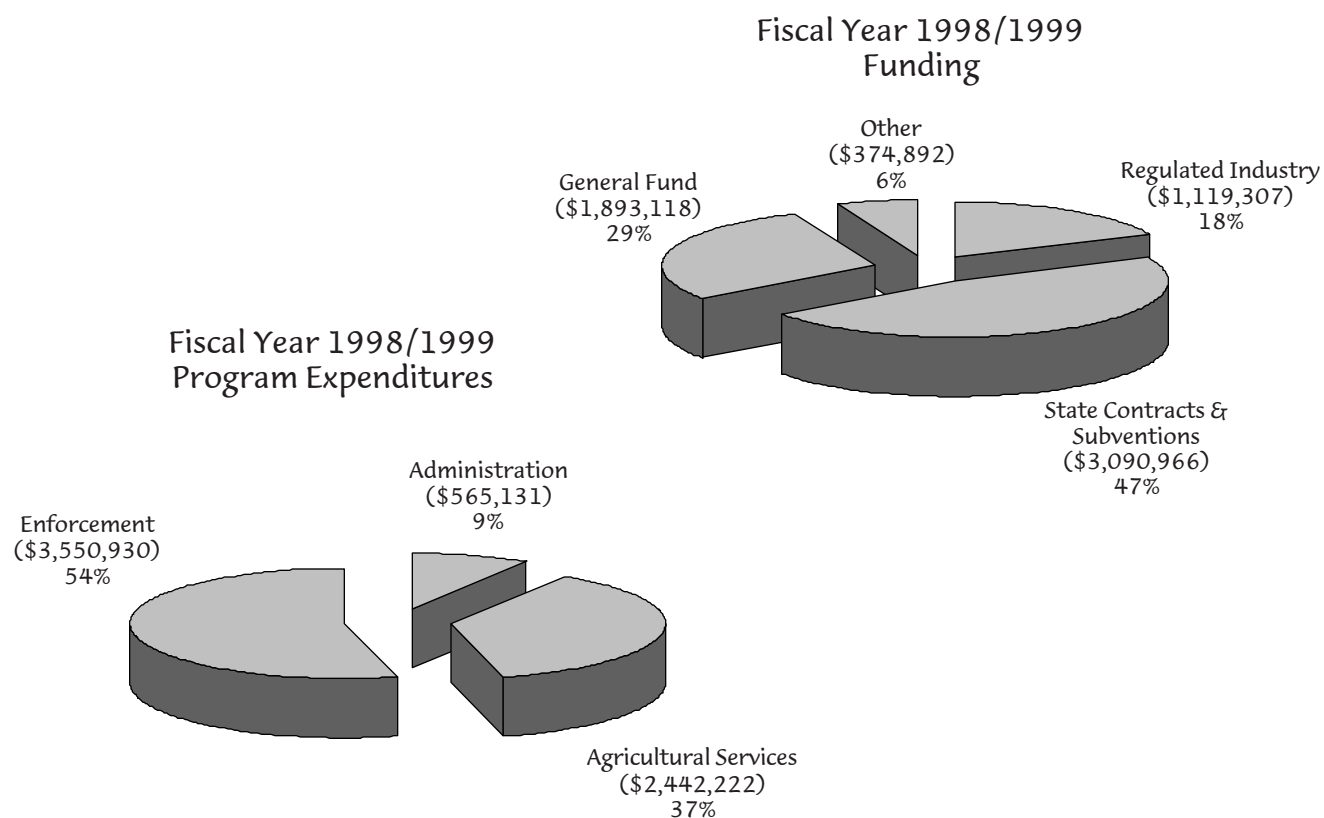
## Organizational Structure

The Department of Agriculture, Weights and Measures has an administrative group that provides departmental oversight, as well as two divisions devoted to Regulatory Enforcement and Agricultural Services. We have 114 budgeted staff persons, but the actual number of people on staff at any given time varies according to the seasonal needs of our programs.



## Budget

The functions of the Department are funded by the regulated industry, county government and state government. Breakdowns of departmental budgeted expenditures and revenues are shown below.



## Customer Service

The Department of Agriculture, Weights and Measures is committed to providing the best service possible to our customers. To that end, we surveyed our customers several times throughout the year and asked your opinion about our service. Although you rated our service very high overall, we received some important feedback on areas where we could improve our service.

Our 1998 survey told us that 96.9% of respondents are satisfied with the overall service they are receiving. Although we are proud of our high satisfaction level, the survey helped us identify one important area where we can make real improvement. Respondents told us they are not always happy with the length of time it takes staff to return phone calls. Based on the survey results, we have two important customer service goals:

- Maintain at least a 95% overall customer satisfaction level; and
- Improve our customer satisfaction rating on same-day return of phone calls by 15%. In our most recent survey, respondents reported that staff returned calls on the same day 54% of the time.

How are we achieving these goals? First, we are clearly communicating these goals throughout the organization. We have set a standard: return all calls within the next business day and, when possible, on the same day.

Although we haven't surveyed yet for 1999, we are encouraged by the results of some smaller surveys where we asked if calls are being returned promptly. On one survey we improved our rating from 3.3 to 4.8 (out of a possible 5).

### Corrective Action Plans

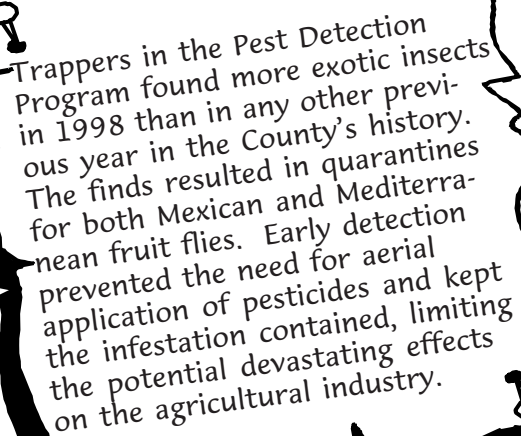
If a customer takes the time to complete one of our surveys and identifies a deficiency in our service, what happens next?

First, the survey and the problem are logged. Second, a deputy director and the appropriate program manager are then responsible for developing a corrective action plan. That plan identifies whether a short-term solution for the specific problem is possible. It also includes long-term plans for ensuring the problem doesn't happen again. Finally, if the customer requests feedback, we contact the person and explain whether correction of the problem was feasible and, if so, how we plan to do it.

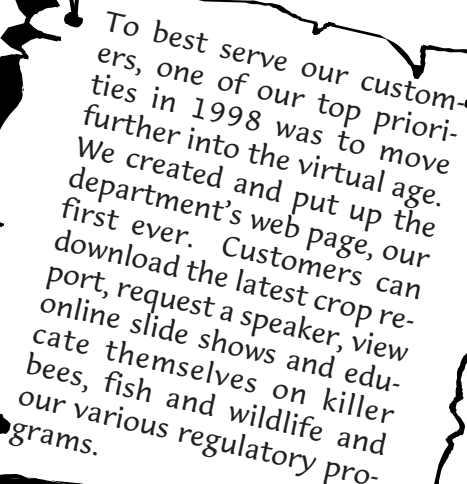
## Agricultural Services Division Overview

The Agricultural Services Division provides support to the community, other regulatory agencies and the local agricultural industry. Many of the programs are small but highly technical, offering important services to our citizens. Staff compile agricultural statistics; maintain entomology, plant pathology/nematology and veterinary pathology laboratories; provide pest control in County facilities; and oversee the hazardous materials storage program. The Division's largest program services approximately 9,000 exotic insect traps.

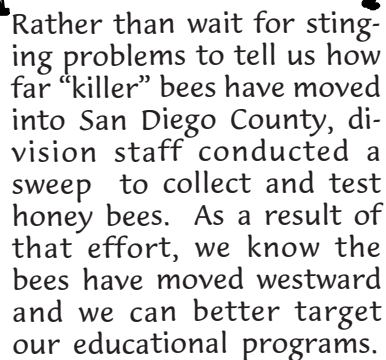
### Division Highlights



Trappers in the Pest Detection Program found more exotic insects in 1998 than in any other previous year in the County's history. The finds resulted in quarantines for both Mexican and Mediterranean fruit flies. Early detection prevented the need for aerial application of pesticides and kept the infestation contained, limiting the potential devastating effects on the agricultural industry.



To best serve our customers, one of our top priorities in 1998 was to move further into the virtual age. We created and put up the department's web page, our first ever. Customers can download the latest crop report, request a speaker, view online slide shows and educate themselves on killer bees, fish and wildlife and our various regulatory programs.



Rather than wait for stinging problems to tell us how far "killer" bees have moved into San Diego County, division staff conducted a sweep to collect and test honey bees. As a result of that effort, we know the bees have moved westward and we can better target our educational programs.



## Regulatory Enforcement Division Overview

The Regulatory Enforcement Division is charged with ensuring that laws and regulations pertaining to pesticide use, standardization, quality control and shipment of plant materials are being followed. From making sure that scales and scanners in the marketplace are correct, to preventing new pests from being introduced to California through illegal shipment of produce or plants, to ensuring that workers wear protective equipment when applying pesticides, inspectors are busy protecting our economy, health and the environment.

### Division Highlights

Division staff began the long and arduous process of mapping sites where restricted materials permits for pesticides were issued. The information will improve decision-making regarding the use of pesticides, since we will be able to identify trends in their use and more appropriately manage pesticides near endangered species habitat and other potentially sensitive areas.

With quarantines in the County for Mexican and Mediterranean fruit flies, the Plant Protection & Quarantine staff had an active role in ensuring that the requirements of the quarantine were understood and met. Staff worked to educate produce vendors within the restricted areas on how to keep the pests from spreading.

Shop 'till you drop--that's what some of our inspectors did as part of our "shopping blitz." We sent staff to local department stores and told them to "buy" items, especially those on sale, to find out if they were charged the correct price. Many overcharges were noted, so staff worked with store personnel to correct problems.

